

NATURAL RESOURCES CONSERVATION SERVICE CONSERVATION PRACTICE SPECIFICATION

CLASS II & III DIKES

(Acre)
CODE 356

GENERAL SPECIFICATION

This specification applies to Class II and III dikes only. Specifications for Class I dikes will be developed using NEH-20.

Preparation of sites for dike construction shall be done in a manner which destroys as little vegetation outside the areas to be occupied by dikes and borrow pits as feasible. Special efforts shall be made to save trees of significant value which are not in the area to be occupied by the dike.

Construction operations shall be carried out in a manner to minimize air and water pollution and hold such pollution within legal limits. Bare areas shall be re-vegetated as soon as practical after earthwork is completed. A minimum area should be stripped of vegetation at any one time to provide an adequate work site.

Disposal of debris from site preparation shall be done in a manner to cause minimum pollution to the environment.

SITE PREPARATION

Clearing. All trees, brush, stumps, roots, rocks and other objectionable materials shall be removed from the foundation and borrow areas and disposed of beyond the limits of the work so as not to interfere with construction.

Foundation Preparation. Following satisfactory completion of clearing operations, all channel banks and sharp breaks shall be sloped to no steeper than 2:1. Topsoil which is high in organic matter shall be removed. The surface area of the foundation area will be thoroughly scarified before placement of the embankment material.

CUT-OFF TRENCH

- The cut-off trench excavation shall be to lines and grades shown on the plans.
- The backfill material shall come from borrow areas specified either on the plans or laid out at the site.

Moisture, placement and compaction requirements shall be identical to the requirements for earthfill.

CONDUIT INSTALLATION

All conduits through a dike shall be placed on a firm foundation. Backfill material approved by the technician shall be placed in layers around the conduits and their component parts and each successive layer shall be thoroughly compacted.

Fill Material. All fill material shall come from borrow areas specified either on the plans or laid out at the site, or approved at the site by the technician. The fill material shall be free of organic matter and other objectionable material and shall contain a minimum percent fine material as specified on the plans.

Fill Placement. The placing and spreading of fill materials shall be started at the lowest point of the foundation and the fill brought up in approximately horizontal lifts not exceeding eight inches before compaction. The top shall be maintained as essentially a level surface during construction. Where borrow yields material of varying texture and gradation, the more impervious material shall be placed toward the water side of the dike.

Moisture Requirements. Material, when placed, shall contain sufficient moisture so that a sample taken in the hand and squeezed shall remain intact when released.

Compaction for Class II dikes shall be obtained by:

- Making two complete passes over the entire surface area of each lift with heavily loaded rubber-tired scrapers;
- Making three complete passes over the entire surface area of each lift with heavily loaded rubber-tired scrapers;

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- Using track type (crawler) equipment provided it is routed so the entire surface area of each lift is traversed by not less than four passes of the tracks.

Compaction for Class III dikes shall be obtained through normal routing of rubber-tired or track-type equipment shall be considered adequate when the preceding moisture requirements are met.

TOLERANCES

The completed embankment's weakest section shall equal or exceed the neat lines of design.

MEASUREMENT

The completed fill volumes shall be completed volumes within the neat lines of design.

This volume shall be used unless a modification of the design has been authorized in a written change order, signed and dated by the technician authorizing the change.

BLOCKS ACROSS BORROW AREAS

When borrow areas are made behind dikes, undisturbed strips of compacted plugs will be placed every 660 feet, or closer as needed, to prohibit flow through the borrow area.